



SOCIETY FOR PEDIATRIC SEDATION

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1. SKILLS

A. Pre-Sedation

- Physical Assessment (focus on neurological, cardiac, respiratory, airway)
- Vital Signs
- IV Access
- Laboratory Tests/Values
- Medication Preparation

B. Intra-Sedation

- Medication Administration
- Bag-Valve-Mask Ventilation
- Suctioning
- Positioning
- Monitoring
- Airway Adjuncts

C. Post-Sedation

- Positioning
- Airway Management
- Vital Signs
- IV Access
- Falls Prevention

2. KNOWLEDGE

A. Pre-Sedation

- Screening/History/Patient Considerations
- Procedural Considerations
- Family Education
- Sedation Medications

- Room Preparation
- Patient Preparation

B. Intra-Sedation

- Recognizing When to Intervene
- Monitoring & Documenting Patient Response
- Adjusting the Sedation Plan

C. Post-Sedation

- Continue Airway Management
- Know the Effects of the Medications
- Work Toward Transfer/Discharge Readiness
- Family Education
- Follow Up

SKILLS

A. Pre-Sedation

- Physical Assessment
 - Obvious Developmental Delays or Physical Deformities
 - Neurological Status
 - Level of Consciousness
 - Hypertonia/hypotonia
 - Developmental Delay
 - Palsy/Cranial Nerve Issues
 - Respiratory Status
 - Work of Breathing/respiratory effort (grunting, retractions, mouth breathing)
 - Obvious upper respiratory infection symptoms (runny nose, cough, audible wheeze)
 - Breath sounds (clear, coarse, wheeze, diminished)
 - Severe scoliosis

- Cardiovascular Status
 - Arrhythmias
 - Murmurs
 - Capillary Refill
 - Pulses
- Airway Status
 - Mallampati (<http://www.drpaulose.com/wp-content/uploads/mallampati.jpg>)
 - Small/retracted mandible
 - Inability to open mouth wide
 - Large tongue/"floppy airway"
 - Neck mass/swelling
 - Tonsillar size
- Vital signs (Growth & Development considerations: equipment & values appropriate for age)
 - Normal values
 - Tachycardia/bradycardia
 - Tachypnea/bradypnea
 - Hypertension/hypotension
 - Oxygen saturation
 - Temperature
- IV Access (Growth & Development considerations: age appropriate distraction, explanation, IV site)
 - Peripheral or central line access
 - Pre-medication (versed, elamax, emla)
 - Anatomical Location
 - Vascular integrity
 - Positioning/immobilizing
- Laboratory Tests/Values (Growth & Development: approach/technique, address pain/fear)
 - Pregnancy Screening
 - Hemoglobin and Hematocrit
 - Blood Counts for Hematology/Oncology

- Medication Preparation
 - 5 “Rights” (patient, medication, dose, route, time)
 - Bolus dosing
 - Concentration
 - Dilution/Diluents
 - Programming Drips
 - Checks & Balances/Time Out
 - Patient Specific Code Sheet

B. Intra-Sedation (routine and emergent skills)

- Medication Administration
 - Rate of administration
- Bag-Valve-Mask Ventilation (Growth & Development considerations: appropriate sized supplies for age/size)
 - Self-inflating or “anesthesia/mapleson” bag
 - Appropriate size mask (good seal)
 - Oxygen source/flow
 - Airway position promotes adequate ventilation (chest rise)
 - Adequate ventilatory rate
 - Other considerations (trach, c-spine instability)
- Suctioning (Growth & Development considerations: appropriate sized supplies for age/size)
 - Removal Nasopharyngeal/Oropharyngeal secretions
 - Vomiting/preventing aspiration
- Positioning (Growth & Development considerations: physical size and anatomical considerations)
 - Airway position
 - Circulatory considerations
 - Safety (seat belts, padding, MRI/radiation precautions, sterile field)

- Monitoring (Growth & Development considerations: appropriate sized supplies/equipment/default settings on monitors)
 - Pulse oximeter probe placement/accurate reading
 - Blood pressure cuff size and location
 - Reading end tidal carbon dioxide tracing
 - Temperature monitoring on neonates
- Airway Adjuncts (Growth & Development considerations: appropriate sized supplies)
 - Blow by/Nasal cannula oxygen
 - Nasopharyngeal/Oropharyngeal tube size determination and proper placement
 - Laryngeal Mask Airway/Endotracheal tube size and placement

C. Post-Sedation

- Positioning
 - Neck/Shoulder Roll
 - Side Lying
 - Post Procedure Requirements
- Airway Management
 - Removing airway adjuncts
 - Oxygen administration
 - Caregiver Holding
- Vital Signs
 - Stable versus Unstable
- IV access
 - Maintain versus Discontinue
 - CVL, portacath and PICC procedures
- Falls Prevention (Growth & Development considerations: independence versus safety)
 - Side rails/Seat Belts
 - Wheelchair

KNOWLEDGE

A. Pre-Sedation

- Screening/History/Patient Considerations
 - Reason for procedure/sedation
 - Prior issues with sedation or general anesthesia
 - Paradoxical reactions
 - Allergic reactions
 - Family history of Malignant Hyperthermia
 - Emergence Reactions
 - Potential airway issues
 - Apnea
 - Asthma/Reactive airway disease/Upper respiratory infection
 - Obesity
 - Tonsillar/adenoid hypertrophy
 - Syndromes (Downs, Pierre Robin, Marfans, Mucopolysaccharidoses)
 - Tracheomalacia/Laryngomalacia
 - Prior tracheostomy
 - Vascular ring
 - Cerebral Palsy/other conditions of muscle weakness
 - Severe scoliosis
 - Swallowing problems
 - Severe Reflux
 - Potential cardiac issues
 - Pulmonary hypertension
 - Acute Cardiomyopathy/Ejection Fraction <35%
 - Hypoplastic Left Heart
 - Single Ventricle physiology – must be past Fontan
 - William Syndrome – with cardiac ischemia

- Baseline neurological/developmental status
 - Within normal limits versus developmental delay
 - Age/maturity level warrants trying without sedation
 - Thermoregulation Considerations
- Disorders of the following systems
 - Endocrine
 - Hepatic
 - Metabolic
 - Renal
 - Blood
- Drug or Food Allergies
- Current Medications
- NPO status
- Last menstrual period
- Weight/Height
- Pertinent laboratory values
- Procedural Considerations
 - Location/Environment
 - Painful versus Non-painful
 - Length of Procedure
 - Radiation Precautions
 - Magnetic Field Precautions
 - Sterile field Requirements
 - Additional Consents
 - Lab work Requirements
 - IV Access Requirement
 - Special Positioning
 - Temperature Considerations

- Family Education
 - Information/explanations tailored to developmental level of patient and family
 - Procedure
 - Sedation Plan
 - Post Sedation Expectations
- Sedation Medications
 - Tailored to patient/procedure to be completed
 - Contraindications
 - Side effects
 - Appropriate/maximum dosing
 - Route options
 - Onset of action/duration of effects
 - Reversal Agents
- Room Preparation
 - Functioning Equipment
 - Monitor
 - Bag-Valve-Mask
 - Oxygen
 - Suction
 - Medication Pump
 - Team Prepared
- Patient Preparation
 - Functioning IV
 - Patient/Family Questions Addressed
 - Procedural Screenings Completed
 - Time Out Performed (checklist)
 - Two patient identifiers reviewed
 - Weight
 - Allergies
 - Medication Doses
 - Procedure to be Done

- Immediate Pre-Procedure Vital Signs

B. Intra-Sedation

- Recognizing When to Intervene
 - Apnea/Hypoventilation
 - Upper Airway Obstruction/Laryngospasm
 - Cardiovascular Instability
 - Pain
 - Medication Reactions
- Monitoring & Documenting Patient Response
 - Amount of Medication Required
 - Additional Medications Required
 - Any Airway Management Interventions Required
 - Adverse or Unexpected Events
 - Vital Signs Every 5 Minutes
 - Includes Level of consciousness
 - Includes Pain Rating
 - Abnormal Vital Sign Causes
 - Check the PATIENT First
 - Medication
 - Equipment
 - Pain
- Adjusting the Sedation Plan
 - Based on the Patient's Response
 - Based on the Goal of the Procedure

C. Post-Sedation

- Continue Airway Management
 - Vital Signs
 - Work of breathing/respiratory effort
 - Airway Adjuncts in Place/Removed

- Know the Effects of the Medications
 - Side Effects
 - How Long Effects Last
 - Decrease External Stimulation
- Work Toward Discharge/Transfer Readiness(Growth & Development considerations: toddlers asserting control by refusing to eat/drink)
 - Return to baseline vital signs and level of consciousness
 - Scoring Tool (Aldrete or other)
 - Tolerating solids/liquids by mouth
 - Transfer to Lower Level of Monitoring
- Family Education
 - Medication Specific
 - Potential Airway Problems
 - Risk of Falls
 - Diet and Home Medications
- Follow Up/Quality
 - Reporting Problems
 - Identifying Trends